

CLAIM AMENDMENTS:

Claims 1-37 (Cancelled)

38. (New) A photovoltaic device comprising a plurality of photovoltaic cells of the p-i-n type placed on a first substrate, wherein said cells are positioned parallel to one another and wherein electrically conductive layers connect a p-type layer of each cell with an n-type layer of an adjacent cell on one side and connect the n-type layer of said same cell with the p-type layer of the adjacent cell on the other side, except for cells located at an outer border of the photovoltaic device, so as to electrically connect all the consecutive cells of the photovoltaic device in series,

wherein at least the p-type layer and the n-type layer of a photovoltaic cell of the photovoltaic device are both located in the same layer on the first substrate, parallel to one another and on top of the electrically conductive layer, wherein said p-type layer and said n-type layer are of equal thickness.

39. (New) The photovoltaic device according to claim 38, wherein of every photovoltaic cell, the n-type layer is formed of n-doped gallium arsenide, the p-type layer is formed of p-doped gallium arsenide, an i-type layer is formed of gallium and the electrically conductive layers are formed of copper.

40. (New) The photovoltaic device according to claim 39, wherein the i-type layers of all photovoltaic cells of the photovoltaic device are formed in one layer, separated by gaps, on a second substrate, and that one lateral side of the i-type layer of every photovoltaic cell is electrically connected to the p-type layer of the respective photovoltaic cell, and the other lateral side of the i-type layer is electrically connected to the n-type layer of the respective

photovoltaic cell and said electrical connections between said photovoltaic cells are formed by using electrically conductive wiring.

41. (New) The photovoltaic device according to claim 40, wherein by varying the width of the gaps between the i-type layers on the second substrate, the peak wavelength in the photosensitivity of the photovoltaic device can be adjusted.

42. (New) The photovoltaic device according to claim 42, wherein said first and second substrates are formed by glass plates, whereby the second substrate forms a top side and the first substrate forms a lower side of the photovoltaic device so that the i-type layer on the second substrate faces the layer containing both the p-type layer and the n-type layer on the first substrate, whereby there is a space between said facing layers and whereby the photovoltaic device is sufficiently transparent in the visible light wavelength range, so as to enable the use of the photovoltaic device as glazing for architectural buildings.

43. (New) A method for producing the photovoltaic device according to claim 38, wherein the layers of the cells of the device are deposited in a vapour phase chemical deposit (CVD) process according to the sequence: first substrate: electrically conductive layer, n-type layer, p-type layer, second substrate: i-type layer.

44. (New) The method for producing the photovoltaic device according to claim 43, wherein for the CVD process permanent masks made of metal, carbon or plastic are used, or disposable single-use masks of impregnated paper or plastic are used.